

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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International Notes

Smallpox Surveillance — Worldwide

A total of 940 outbreaks of smallpox involving 3,208 cases have been reported to the World Health Organization (WHO) in the period January 1 — October 4, 1977.* The world's last known foci of smallpox are now confined to southern Somalia, which accounted for all but 5 of this year's reported cases. However, Somalia, southern Ethiopia, northern Kenya, and the Republic of Djibouti form one epidemiologic unit since nomadic populations roam throughout the Ogaden Desert, which includes parts of all of these countries.

Somalia: The incidence of smallpox has declined sharply since June (Figure 1). Since mid-August, this decline has slowed, at least partially because of persistent smallpox transmission in small nomadic groups in the more remote desert areas. In May, for example, 40% of the outbreaks were occurring in nomadic populations; this figure increased to 95% in July and is still rising. Epidemiologic investigations have revealed that transmission of the disease can persist undetected for 4-6 months under such circumstances. To combat this, locally recruited surveillance workers have been traveling on foot, seeking smallpox cases and performing vaccinations.

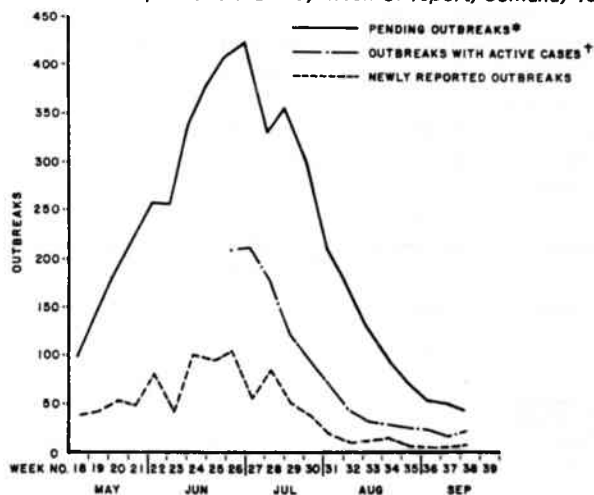
As of September 24, there were only 21 localities with active cases of smallpox. (An active case is defined as a person who is still ill and could transmit the disease to another unvaccinated person; normally, this period of potential infectivity lasts 3-4 weeks.) As of October 1, the number of infected localities had further declined to 10. In northern Somalia active surveillance has failed to detect any smallpox except for a single case found in July in the Burao District; that case originated in the southern district of Jowhar.

If the current efforts of the Somali Government are maintained, it should be possible to interrupt transmission of smallpox by early November. At present, there are 24 WHO personnel, 2,550 national staff members, and 50 vehicles assigned to the program.

Kenya: Continuing special surveillance and vaccination programs in the north have revealed no further smallpox since 5 cases were reported in early February. From April to September, 65 specimens were collected from suspect

"fever with rash" cases, but all proved negative upon laboratory examination.

FIGURE 1. Smallpox outbreaks by week of report, Somalia, 1977



*A pending outbreak is one in which 6 weeks has not elapsed since the onset of rash of the last case.

†A smallpox case is "active" while the person is still ill and capable of transmitting disease—normally 3-4 weeks.

Surveillance and vaccination are being intensified with special attention being directed to the potential danger of importation into the Mandera and Marsabit Districts. A reward of 200 Kenyan shillings (US\$24) is being given for reporting a case of smallpox, and active searches on foot, using increased staff, have been instituted to detect hidden foci in nomad populations.

Ethiopia: The Ethiopian program recorded its last known smallpox case in August 1976 in the Bale Region in the Ogaden Desert. Surveillance and vaccination activities in large areas of the Ogaden have had to be restricted because of civil unrest; however, a special search and vaccination campaign has been initiated in the regions adjacent to the restricted areas.

Sudan: The last case of smallpox in Sudan was detected in 1972. The proximity of the Sudan to the Ogaden, however, places it at risk of importation.

Republic of Djibouti: In view of frequent movements of populations across the borders, among them displaced persons from the Ogaden, special smallpox surveillance activities are being prepared in collaboration with WHO. A total of

*An outbreak is defined as 1 or more cases. Of interest is the fact that the reward of 200 Somali shillings (US\$32) for reporting a case of smallpox has resulted in the detection of 40% of the outbreaks reported this year.

400 personnel are working for disease control, including 2 epidemiologic surveillance teams of 20 persons each.

Reported by the World Health Organization in the Weekly Epidemiologic Record 52:317-321, 1977.

Epidemiologic Notes and Reports

Tick-borne Relapsing Fever — Colorado

Since July 1977, 3 confirmed cases of tick-borne relapsing fever have been reported to the Colorado State Health Department. All occurred in Jefferson County, a 785 square mile area southwest of Denver that extends approximately 20 miles into the front range of the Rocky Mountains. These are the first reported cases of relapsing fever in Colorado since 1944.

The onset of the first case in 1977 was on July 25 and occurred in a 32-year-old man originally diagnosed as having Colorado tick fever. However, recurrence of symptoms, including fever up to 41 C, chills, headache, arthralgias, and myalgia on July 29, August 5, and August 10, prompted examination of a thick blood smear. *Borrelia* organisms were numerous, and a diagnosis of tick-borne relapsing fever was made. The patient was treated with penicillin and showed gradual improvement.

He had not traveled outside Jefferson County. He, his 24-year-old wife, and their 2 young children reported suffering "spider bites" during early July. Investigation revealed ample rodent harborage around the patient's 2-story frame house and adjacent barn. Squirrels, gaining access through woodpecker holes, had established nests in the house attic. No ticks were collected from these nests; the nests, how-

ever, appeared to have been vacated for several weeks. The entire house interior was sprayed with 1½% Baygon.* No similar illnesses were reported among residents in the immediate area.

The second case involved a 26-year-old male college student, who attended a reunion at Wellington Reservoir in southwestern Jefferson County the week of July 11 and became ill with fever 4 times during the next month. Along with 7 other young people, he spent 1 week in mid-July in a rustic lodge; his bed was located in a second-story loft. No other illnesses in this group were reported. The patient was treated with tetracycline and recovered uneventfully. Again, rodents had gained entry into an attic space, but no ticks were recovered from their nests. An anticoagulant rodenticide was placed in the attic space in early spring and may have been responsible for host elimination and subsequent tick dispersal. Several dry carcasses of chipmunks and white-footed mice (*Eutamias* and *Peromyscus* species, respectively) were found near consumed packets of rodenticide.

The most recent case occurred in a 10-year-old Girl

*Use of trade names is for identification only and does not constitute endorsement by the PHS, U.S. Dept. HEW.

(Continued on page 359)

Table I. Summary—Cases of Specified Notifiable Diseases: United States

[Cumulative totals include revised and delayed reports through previous weeks]

DISEASE	42nd WEEK ENDING		MEDIAN 1972-1976	CUMULATIVE, FIRST 42 WEEKS		
	October 22, 1977	October 23, 1976		October 22, 1977	October 23, 1976	MEDIAN 1972-1976
Aseptic meningitis	143	107	107	3,675	2,608	3,210
Brucellosis	5	—	6	185	254	158
Chickenpox	873	1,055	—	161,223	153,564	—
Diphtheria	—	1	2	72	128	155
Encephalitis	47	44	44	816	1,190	1,190
{ Primary	5	2	2	166	227	234
{ Post-Infectious	299	334	191	13,117	12,141	7,828
Hepatitis, Viral	606	709	803	24,740	27,337	33,745
{ Type B	161	152	—	7,326	6,615	—
{ Type A	13	15	12	443	389	348
{ Type unspecified	111	225	118	53,218	35,206	24,661
Malaria	24	25	21	1,415	1,279	1,141
Measles (rubeola)	24	25	19	1,406	1,262	1,115
Meningococcal infections, total	—	—	—	9	17	25
Civilian	270	291	589	16,655	33,833	48,933
Military	61	24	—	1,292	784	—
Mumps	51	78	108	18,870	10,968	15,223
Pertussis	2	2	2	54	52	75
Rubella (German measles)	545	655	—	24,526	26,677	—
Tetanus	3	4	1	133	113	113
Tuberculosis	10	8	9	324	343	340
Tularemia	15	16	10	1,052	827	736
Typhoid fever	—	—	—	—	—	—
Typhus, tick-borne (Rky. Mt. spotted fever)	21,569	22,317	—	804,497	818,074	—
Venereal Diseases:	393	609	—	21,657	23,976	—
{ Gonorrhea	408	563	—	16,666	19,585	—
{ Syphilis, primary and secondary	8	10	—	245	282	—
Rabies in animals	72	72	57	2,498	2,470	2,470

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	—	Poliomyelitis, total:	9
Botulism: Tenn. 1	86	Paralytic:	8
Congenital rubella syndrome:	14	Psittacosis: Mass. 1, Calif. 1	55
Leprosy:	108	Rabies in man:	1
Leptospirosis:	33	Trichinosis: *Colo. 1	71
Plague:	15	Typhus, murine: Ga. 1, Texas 4	65

Delayed reports: Trichinosis: N.J. 21

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 22, 1977 and October 23, 1976 - 42nd Week

AREA REPORTING	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1977	1976	1977	1977	1977	1977		
UNITED STATES	143	5	873	-	72	47	44	5	299	606	161	13	440
NEW ENGLAND	6	-	86	-	-	1	-	-	19	12	8	-	23
Maine	-	-	7	-	-	-	-	-	-	1	-	-	-
New Hampshire	1	-	-	-	-	-	-	-	-	-	-	-	3
Vermont	-	-	1	-	-	-	-	-	-	-	-	-	2
Massachusetts	2	-	57	-	-	1	-	-	-	6	8	-	4
Rhode Island	1	-	15	-	-	-	-	-	3	2	-	-	5
Connecticut	2	-	6	-	-	-	-	-	16	3	-	-	9
MIDDLE ATLANTIC	26	-	84	-	5	4	4	-	36	35	13	4	97
Upstate New York	12	-	77	-	-	-	1	-	5	12	1	1	22
New York City	7	-	6	-	5	-	2	-	15	7	3	2	45
New Jersey*	3	-	NN	-	-	2	-	-	16	16	9	-	12
Pennsylvania*	4	-	1	-	-	2	1	-	NA	NA	NA	1	18
EAST NORTH CENTRAL	42	-	301	-	-	23	8	-	78	141	18	1	33
Ohio	13	-	17	-	-	9	7	-	27	44	-	1	12
Indiana*	8	-	31	-	-	6	-	-	14	6	9	-	2
Illinois	-	-	18	-	-	4	-	-	14	37	3	-	2
Michigan	18	-	146	-	-	2	1	-	18	37	5	-	14
Wisconsin	3	-	89	-	-	2	-	-	5	17	1	-	3
WEST NORTH CENTRAL	5	1	108	-	1	3	8	-	11	33	2	-	34
Minnesota	-	-	-	-	-	-	1	-	3	6	-	-	11
Iowa	-	1	83	-	-	-	-	-	3	2	1	-	1
Missouri*	-	-	7	-	1	2	2	-	2	10	1	-	16
North Dakota*	-	-	1	-	-	-	-	-	-	-	-	-	1
South Dakota	-	-	1	-	-	1	-	-	1	5	-	-	1
Nebraska	1	-	2	-	-	-	-	-	-	1	-	-	-
Kansas	4	-	14	-	-	-	5	-	2	9	-	-	4
SOUTH ATLANTIC	15	2	90	-	-	3	-	5	43	60	11	4	84
Delaware	-	-	1	-	-	-	-	1	-	1	-	-	-
Maryland	3	-	1	-	-	-	-	-	12	4	3	-	21
District of Columbia	1	-	-	-	-	1	-	-	-	-	-	2	6
Virginia	6	2	-	-	-	-	-	-	12	10	3	-	20
West Virginia	1	-	77	-	-	-	-	-	-	5	-	1	2
North Carolina	-	-	NN	-	-	1	-	-	3	5	2	-	8
South Carolina	-	-	-	-	-	-	-	-	1	3	-	-	-
Georgia	-	-	-	-	-	-	-	-	2	12	-	-	8
Florida*	4	-	11	-	-	1	-	4	13	25	3	1	19
EAST SOUTH CENTRAL	9	2	30	-	-	1	16	-	21	61	5	-	10
Kentucky*	1	-	20	-	-	-	4	-	5	30	4	-	4
Tennessee	3	-	NN	-	-	-	3	-	13	16	-	-	1
Alabama	5	1	1	-	-	-	9	-	2	5	1	-	4
Mississippi	-	1	9	-	-	1	-	-	1	13	-	-	1
WEST SOUTH CENTRAL	9	-	40	-	3	4	6	-	16	76	38	-	26
Arkansas	-	-	1	-	-	-	-	-	3	9	6	-	2
Louisiana	-	-	NN	-	-	2	1	-	-	4	3	-	2
Oklahoma	-	-	1	-	-	-	-	-	3	-	4	-	-
Texas	9	-	38	-	3	2	5	-	10	63	25	-	22
MOUNTAIN	4	-	44	-	5	-	1	-	1	27	15	-	13
Montana	1	-	5	-	-	-	-	-	-	4	-	-	2
Idaho*	-	-	17	-	-	-	-	-	-	1	1	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	2
Colorado	-	-	17	-	-	-	1	-	1	11	9	-	6
New Mexico	-	-	5	-	4	-	-	-	-	2	2	-	1
Arizona	-	-	NN	-	1	-	-	-	-	8	-	-	2
Utah	3	-	-	-	-	-	-	-	-	1	3	-	-
Nevada*	-	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	27	-	90	-	58	8	1	-	74	161	51	4	120
Washington	2	-	76	-	53	-	-	-	12	32	6	-	5
Oregon	-	-	-	-	-	-	-	-	4	16	3	-	1
California*	25	-	-	-	3	8	1	-	57	106	41	4	108
Alaska	-	-	3	-	2	-	-	-	-	3	1	-	2
Hawaii	-	-	11	-	-	-	-	-	1	4	-	-	4
Guam	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
Puerto Rico	-	-	1	-	-	-	-	-	-	10	3	-	2
Virgin Islands*	-	-	-	-	-	-	-	-	-	-	-	-	-

NN: Not notifiable

NA: Not available

*Delayed reports: Aseptic meningitis: N.J., +1; Nev., +1; Chickenpox: Mo., +27; Calif., +2; Encephalitis: Pa., -1; Ind., +6; Ky., -1; Hep. B: N.J., +3; N.Dak., +1; Va., -1; Fla., -2; Idaho +1; Hep. A: N.J., -1, Fla., -12; V.I., +2; Hep. unsp.: N.J., -3; Va., -3; Idaho -1.

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 22, 1977 and October 23, 1976 — 42nd Week

REPORTING AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1977	CUMULATIVE		1977	CUMULATIVE		1977	CUM. 1977	1977	1977	CUM. 1977	CUM. 1977
		1977	1976		1977	1976						
UNITED STATES	111	53,218	35,206	24	1,415	1,279	270	16,655	61	51	18,870	54
NEW ENGLAND	4	2,483	419	1	56	60	12	678	-	4	1,211	1
Maine	-	173	8	-	3	1	6	64	-	-	69	-
New Hampshire	-	510	9	-	3	6	1	92	-	-	243	-
Vermont	-	294	69	-	6	3	-	8	-	-	64	-
Massachusetts*	4	635	35	-	16	18	1	126	-	2	381	-
Rhode Island	-	64	15	1	2	6	-	61	-	-	134	-
Connecticut	-	810	283	-	26	26	4	327	-	2	320	1
MIDDLE ATLANTIC	16	8,374	7,061	2	200	181	14	1,331	6	-	6,022	4
Upstate New York	9	3,826	2,950	-	52	67	9	298	3	-	3,368	1
New York City	5	737	475	-	48	48	3	498	1	-	322	1
New Jersey	2	197	611	2	43	27	2	354	-	-	1,782	2
Pennsylvania	-	3,614	3,025	-	57	39	-	131	2	-	550	-
EAST NORTH CENTRAL ..	37	11,402	14,902	7	146	163	103	5,650	8	20	3,778	5
Ohio	-	1,858	577	2	58	68	7	681	3	1	1,127	1
Indiana	2	4,339	3,376	1	17	17	17	134	-	5	957	1
Illinois	16	1,731	1,641	-	22	23	18	1,006	1	-	323	1
Michigan	6	983	5,867	4	42	50	32	1,910	2	10	960	2
Wisconsin	13	2,441	3,441	-	14	11	23	1,725	2	4	411	-
WEST NORTH CENTRAL ..	13	9,348	1,285	1	71	85	53	3,761	-	2	518	9
Minnesota	2	2,624	425	-	25	14	-	6	-	-	17	2
Iowa	11	4,294	44	-	6	9	12	1,300	-	1	168	1
Missouri*	-	914	35	1	28	36	16	1,298	-	-	36	3
North Dakota	-	24	3	-	1	3	1	19	-	1	13	-
South Dakota	-	67	4	-	4	3	-	59	-	-	18	-
Nebraska	-	214	55	-	2	6	6	77	-	-	3	-
Kansas*	-	1,211	719	-	5	14	18	1,002	-	-	263	3
SOUTH ATLANTIC	1	4,632	2,192	5	304	249	22	818	29	5	1,682	12
Delaware	-	22	130	1	7	8	2	133	-	-	26	-
Maryland	-	372	715	1	21	21	1	71	-	1	6	-
District of Columbia ..	-	14	13	-	-	2	-	6	-	-	-	-
Virginia	1	2,725	769	1	27	39	2	104	2	1	578	1
West Virginia	-	248	201	-	9	7	6	183	15	2	152	-
North Carolina	-	65	17	1	65	47	2	57	2	-	446	-
South Carolina	-	153	4	1	33	36	1	14	1	-	230	-
Georgia	-	768	2	-	52	24	-	26	8	-	55	1
Florida	-	265	341	-	90	65	8	224	1	1	189	10
EAST SOUTH CENTRAL ..	1	2,314	887	3	145	110	16	924	-	4	1,939	4
Kentucky	1	1,191	752	3	29	23	3	101	-	-	82	1
Tennessee	-	707	118	-	36	49	5	551	-	4	1,737	2
Alabama	-	78	-	-	53	33	8	233	-	-	110	1
Mississippi	-	38	17	-	27	14	-	39	-	-	9	-
WEST SOUTH CENTRAL ..	8	2,105	743	-	279	194	26	1,519	1	1	919	10
Arkansas	-	29	8	-	15	11	-	84	1	-	3	2
Louisiana	1	75	222	-	127	35	5	55	-	-	27	2
Oklahoma	1	60	291	-	14	21	16	523	-	-	33	-
Texas*	6	1,941	222	-	123	127	5	357	-	1	756	6
MOUNTAIN	2	2,531	5,120	1	33	37	3	609	1	-	375	2
Montana*	-	1,162	246	1	4	5	1	12	-	-	14	1
Idaho	-	161	2,320	-	4	5	-	124	-	-	13	-
Wyoming	-	19	4	-	1	-	-	4	-	-	6	1
Colorado	-	503	305	-	1	6	1	268	-	-	237	-
New Mexico	-	256	16	-	9	4	-	105	1	-	11	-
Arizona	-	317	227	-	10	10	-	-	-	-	16	-
Utah	2	20	2,237	-	3	5	-	80	-	-	69	-
Nevada	-	93	65	-	1	2	1	16	-	-	9	-
PACIFIC	29	10,329	2,597	4	181	191	21	1,359	16	15	2,527	7
Washington	-	542	352	1	24	32	6	292	5	1	445	-
Oregon	-	366	170	-	17	17	6	253	6	3	115	-
California	29	9,326	2,368	3	109	119	8	760	5	11	1,552	7
Alaska	-	60	4	-	29	20	1	30	-	-	1	-
Hawaii	-	35	3	-	2	3	-	24	-	-	414	-
Guam	NA	11	16	-	1	-	NA	6	NA	NA	10	-
Puerto Rico	2	993	444	-	1	3	7	729	-	-	35	10
Virgin Islands	-	14	14	-	-	1	-	189	-	-	2	-

NA: Not available

*Delayed Reports: Measles: Mass. -1; Men. inf.: Mo. +1; Mumps: Mo. +17; Kans. -1; Mont. -1; Pertussis: Tex. -1; Rubella: Mo. +1.

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 22, 1977 and October 23, 1976 - 42nd Week

REPORTING AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1977	CUM. 1977	CUM. 1977	1977	CUM. 1977	1977	CUM. 1977	1977	CUMULATIVE		1977	CUMULATIVE		CUM. 1977
									1977	1976		1977	1976	
UNITED STATES	545	24,526	133	10	324	15	1,052	21,569	804,497	818,074	408	16,666	19,585	2,498
NEW ENGLAND	21	900	1	1	17	-	10	598	21,680	22,760	9	659	652	44
Maine	-	72	-	-	-	-	-	14	1,571	1,938	-	23	19	32
New Hampshire	1	24	-	-	1	-	-	32	886	671	-	4	9	1
Vermont	2	31	-	-	-	-	-	22	546	572	-	6	9	-
Massachusetts	16	515	1	1	12	-	5	248	9,236	10,839	5	461	464	8
Rhode Island*	2	75	-	-	2	-	3	52	1,730	1,548	-	9	17	-
Connecticut	-	183	-	-	2	-	2	230	7,711	7,192	4	156	134	3
MIDDLE ATLANTIC	91	3,974	3	1	64	6	72	2,673	84,226	94,300	71	2,340	3,264	96
Upstate New York	32	691	3	-	8	6	41	473	14,353	15,386	7	219	198	55
New York City	23	1,242	-	-	26	-	-	774	32,715	41,471	35	1,470	2,072	-
New Jersey	21	1,014	-	1	19	-	11	595	15,224	14,642	10	300	460	28
Pennsylvania	15	1,027	-	-	11	-	20	831	21,934	22,801	19	351	534	13
EAST NORTH CENTRAL ..	84	3,839	3	2	29	1	31	3,425	127,008	128,927	35	1,717	1,687	116
Ohio	17	659	1	-	9	-	12	1,414	33,723	31,644	9	397	406	-
Indiana	5	445	-	1	3	-	2	480	11,919	12,775	-	132	89	9
Illinois	33	1,507	-	-	5	1	15	516	40,729	45,050	23	901	892	36
Michigan	27	1,063	-	1	12	-	2	746	29,369	27,979	2	198	211	6
Wisconsin*	2	165	2	-	-	-	-	269	11,268	11,479	1	89	89	65
WEST NORTH CENTRAL ..	9	800	25	-	22	-	32	1,180	42,283	42,931	5	369	365	628
Minnesota	7	176	-	-	5	-	-	181	7,638	7,505	1	116	79	225
Iowa	1	74	-	-	-	-	1	124	4,923	5,402	1	36	37	101
Missouri*	-	334	23	-	12	-	17	436	17,510	17,150	3	145	150	45
North Dakota	-	20	-	-	1	-	-	25	789	658	-	-	-	95
South Dakota	-	43	2	-	-	-	2	50	1,261	1,254	-	9	4	120
Nebraska	-	32	-	-	1	-	1	112	3,658	3,640	-	25	29	2
Kansas	1	121	-	-	3	-	11	252	6,504	7,322	-	38	66	40
SOUTH ATLANTIC	115	5,356	10	-	53	1	565	5,225	198,306	200,579	117	4,571	5,921	280
Delaware	-	53	-	-	-	-	3	66	2,684	2,752	-	19	55	2
Maryland*	24	763	2	-	4	-	74	545	24,484	26,123	3	286	480	-
District of Columbia ..	-	263	-	-	1	-	-	441	13,071	13,655	7	468	464	-
Virginia*	8	628	1	-	9	-	152	521	20,826	21,420	12	454	565	5
West Virginia	4	201	-	-	4	-	5	47	2,590	2,477	-	3	20	9
North Carolina*	18	870	2	-	4	1	215	890	29,816	28,585	32	633	1,089	11
South Carolina	3	494	2	-	3	-	52	318	18,573	19,036	4	201	306	26
Georgia	36	703	3	-	13	-	63	1,138	38,388	38,336	18	1,315	881	170
Florida*	22	1,381	-	-	15	-	1	1,289	47,874	48,195	41	1,492	2,061	57
EAST SOUTH CENTRAL ..	41	2,236	8	4	11	1	166	1,979	70,928	72,247	15	639	752	65
Kentucky	9	584	2	4	5	-	43	201	9,639	9,516	-	81	106	23
Tennessee	22	685	5	-	2	-	99	680	28,278	28,832	4	200	254	32
Alabama	10	575	1	-	1	-	19	761	19,309	20,185	4	141	157	10
Mississippi	-	392	-	-	3	1	8	337	13,702	13,714	7	217	235	-
WEST SOUTH CENTRAL ..	75	2,886	65	1	28	6	158	2,580	101,173	103,547	57	2,462	2,355	681
Arkansas	3	311	44	-	6	-	52	144	7,766	9,685	-	57	89	100
Louisiana	12	529	1	-	1	-	6	494	15,177	15,224	18	576	481	22
Oklahoma*	1	255	11	-	1	6	71	292	9,753	10,002	-	63	82	216
Texas	59	1,791	9	1	20	-	29	1,650	68,477	68,636	39	1,766	1,703	343
MOUNTAIN	18	703	12	-	27	-	13	900	32,471	33,168	5	381	495	175
Montana*	2	45	1	-	-	-	6	60	1,726	1,678	-	4	7	45
Idaho	1	26	-	-	-	-	4	41	1,490	1,789	-	11	21	-
Wyoming	-	16	1	-	-	-	2	16	764	646	-	4	3	1
Colorado	4	98	3	-	8	-	1	186	8,480	8,432	3	106	114	56
New Mexico	3	136	-	-	-	-	-	149	4,780	6,041	-	106	119	19
Arizona	6	301	2	-	13	-	-	221	8,980	9,745	2	128	179	44
Utah	2	34	5	-	5	-	-	52	1,929	1,797	-	8	20	10
Nevada	-	47	-	-	1	-	-	175	4,322	3,070	-	14	32	-
PACIFIC	91	3,832	6	1	73	-	5	3,009	126,422	119,615	94	3,528	4,094	413
Washington	NA	246	-	-	2	-	-	285	9,711	10,091	NA	187	133	2
Oregon	-	146	1	-	3	-	1	183	8,749	8,966	3	118	91	7
California	79	2,895	5	1	67	-	-	2,410	101,272	94,852	91	3,168	3,773	367
Alaska	-	64	-	-	-	-	-	46	4,024	3,462	-	23	21	37
Hawaii	12	481	-	-	1	-	-	85	2,666	2,244	-	32	76	-
Guam	NA	49	-	NA	1	NA	-	NA	164	278	NA	2	2	-
Puerto Rico	15	323	-	-	6	-	-	28	2,572	2,222	1	432	496	47
Virgin Islands*	-	1	-	-	-	-	-	2	166	208	-	8	48	-

NA: Not available

*Delayed reports: TB: Md. -3, N.C. -3, Fla. -9; Typhoid fever: Wisc. +1, Mo. -1, Va. -1; RMSF: Okla. -1; GC: Mont. +1 civ. -1 mil., V.I. +6 civ.; Syphilis: R.I. -1

Table IV
Deaths in 121 United States Cities*
Week Ending October 22, 1977 - 42nd Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES	REPORTING AREA	ALL CAUSES					Pneumonia and Influenza ALL AGES
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year			ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	
NEW ENGLAND	634	411	159	24	25	20	SOUTH ATLANTIC ...	1,066	590	315	69	55	43
Boston, Mass.	172	98	44	16	9	3	Atlanta, Ga.	122	68	41	5	3	4
Bridgeport, Conn.	52	41	10	1	-	3	Baltimore, Md.	188	105	58	11	8	6
Cambridge, Mass.	19	14	4	1	-	3	Charlotte, N. C.	77	37	23	9	4	1
Fall River, Mass.	24	19	4	-	1	-	Jacksonville, Fla.	92	58	22	3	5	7
Hartford, Conn.	60	30	22	2	4	3	Miami, Fla.	92	43	29	7	9	4
Lowell, Mass.	38	29	9	-	-	2	Norfolk, Va.	42	16	17	6	2	-
Lynn, Mass.	20	16	3	1	-	-	Richmond, Va.	80	33	22	6	14	5
New Bedford, Mass.	25	19	4	1	1	-	Savannah, Ga.	40	21	14	3	1	3
New Haven, Conn.	43	23	14	1	2	1	St. Petersburg, Fla.	88	67	16	4	1	3
Providence, R.I.	53	33	15	1	2	1	Tampa, Fla.	82	51	22	2	3	5
Somerville, Mass.	8	4	3	-	1	-	Washington, D. C.	122	67	40	10	2	4
Springfield, Mass.	48	31	12	-	4	2	Wilmington, Del.	41	24	11	3	3	1
Waterbury, Conn.	27	17	9	-	-	-							
Worcester, Mass.	45	37	6	-	1	2							
MIDDLE ATLANTIC ...	2,861	1,821	698	175	86	152	EAST SOUTH CENTRAL	689	387	194	55	26	50
Albany, N. Y.	52	28	16	3	2	1	Birmingham, Ala.	109	63	35	3	4	2
Allentown, Pa.	23	18	3	-	1	2	Chattanooga, Tenn.	75	51	14	4	3	10
Buffalo, N. Y.	109	74	25	6	4	5	Knoxville, Tenn.	38	30	4	3	-	3
Camden, N. J.	36	28	5	2	1	2	Louisville, Ky.	118	69	30	8	5	16
Elizabeth, N. J.	25	15	6	2	-	1	Memphis, Tenn.	149	78	44	15	6	3
Erie, Pa.	43	32	10	-	1	4	Mobile, Ala.	66	31	22	7	4	4
Jersey City, N. J.	42	27	10	2	3	2	Montgomery, Ala.	35	19	9	4	1	7
Newark, N. J.	62	31	22	6	1	4	Nashville, Tenn.	99	46	36	11	3	5
New York City, N. Y.	1,425	915	333	94	38	70	WEST SOUTH CENTRAL	1,146	631	302	100	49	29
Peterborough, N. J.	49	30	15	2	1	-	Austin, Tex.	50	27	17	5	1	3
Philadelphia, Pa.	392	225	114	30	16	33	Baton Rouge, La.	43	28	12	2	-	3
Pittsburgh, Pa.	193	115	57	10	6	14	Corpus Christi, Tex.	46	18	15	4	5	2
Reading, Pa.	26	18	4	1	-	2	Dallas, Tex.	167	86	56	10	6	4
Rochester, N. Y.	122	88	17	5	6	10	El Paso, Tex.	65	26	15	12	5	5
Schenectady, N. Y.	33	23	8	1	-	3	Fort Worth, Tex.	67	37	15	8	2	-
Scranton, Pa.	39	32	4	1	1	4	Houston, Tex.	281	149	74	26	12	4
Syracuse, N. Y.	94	58	28	4	3	-	Little Rock, Ark.	64	32	15	9	2	1
Trenton, N. J.	43	29	9	3	2	1	New Orleans, La.	106	59	25	10	9	1
Utica, N. Y.	27	17	9	1	-	3	San Antonio, Tex.	139	89	31	9	6	3
Yonkers, N. Y.	26	18	3	2	-	1	Shreveport, La.	61	43	15	1	1	2
							Tulsa, Okla.	57	37	12	4	-	1
EAST NORTH CENTRAL	2,375	1,432	639	131	97	64	MOUNTAIN	471	267	122	32	20	11
Akron, Ohio	66	47	14	3	1	-	Albuquerque, N. Mex.	40	25	10	2	1	2
Canton, Ohio	41	25	14	-	2	3	Colorado Springs, Colo.	24	17	2	2	1	1
Chicago, Ill.	577	304	173	51	29	13	Denver, Colo.	115	63	26	13	8	2
Cincinnati, Ohio	186	119	46	11	6	3	Las Vegas, Nev.	29	13	12	3	-	-
Cleveland, Ohio	195	120	48	4	13	3	Ogden, Utah	19	11	5	1	1	-
Columbus, Ohio	137	81	33	9	8	10	Phoenix, Ariz.	104	62	30	3	3	1
Dayton, Ohio	97	59	28	2	3	3	Pueblo, Colo.	18	11	4	3	-	2
Detroit, Mich.	314	191	93	17	8	7	Salt Lake City, Utah	48	25	12	1	4	3
Evansville, Ind.	33	22	9	1	1	1	Tucson, Ariz.	74	40	21	4	2	-
Fort Wayne, Ind.	59	39	15	1	2	3							
Gary, Ind.	22	9	3	7	2	1	PACIFIC	1,612	1,034	359	99	65	39
Grand Rapids, Mich.	55	37	14	-	3	2	Berkeley, Calif.	19	13	4	1	-	-
Indianapolis, Ind.	148	83	44	7	6	1	Fresno, Calif.	88	62	16	3	3	1
Madison, Wis.	42	23	10	3	4	2	Glendale, Calif.	18	15	2	-	1	1
Milwaukee, Wis.	115	84	27	2	1	2	Honolulu, Hawaii	64	41	15	4	3	1
Peoria, Ill.	13	9	2	1	-	2	Long Beach, Calif.	85	58	21	1	4	1
Rockford, Ill.	41	24	9	3	2	5	Los Angeles, Calif.	444	284	96	35	13	9
South Bend, Ind.	27	18	5	3	-	2	Oakland, Calif.	73	55	11	2	3	2
Toledo, Ohio	134	88	35	4	5	3	Pasadena, Calif.	29	17	6	5	1	1
Youngstown, Ohio	73	50	17	2	1	-	Portland, Oreg.	165	95	48	8	6	2
WEST NORTH CENTRAL	816	525	196	38	31	28	Sacramento, Calif.	63	35	17	6	3	3
Des Moines, Iowa	56	32	18	3	-	1	San Diego, Calif.	128	74	31	8	8	3
Duluth, Minn.	32	22	5	1	2	3	San Francisco, Calif.	142	88	28	10	10	4
Kansas City, Kans.	42	27	9	4	1	-	San Jose, Calif.	51	34	10	5	2	2
Kansas City, Mo.	145	94	36	8	5	3	Seattle, Wash.	169	113	38	8	6	4
Lincoln, Nebr.	22	14	3	5	-	-	Spokane, Wash.	31	18	8	2	2	2
Minneapolis, Minn.	102	66	24	2	6	2	Tacoma, Wash.	43	32	8	1	-	3
Omaha, Nebr.	83	49	23	2	6	1							
St. Louis, Mo.	201	130	55	4	7	6	TOTAL	11,670	7,098	2,984	723	454	446
St. Paul, Minn.	76	52	13	7	3	4	Expected Number	11,141	6,759	2,876	726	377	370
Wichita, Kans.	57	39	10	2	1	8							

* By place of occurrence and week of filing certificate. Excludes fetal deaths.

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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Center for Disease Control, Attn.: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

Send mailing list additions, deletions, and address changes to: Center for Disease Control, Attn.: Distribution Services, GSO, 1-SB-36, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Relapsing Fever — Continued

Scout from Denver, who spent 6 days (August 11-16) at a ranch about 8 miles west of Deckers, Colorado. During this time she slept on a mattress in a wooden-floored tent with 3 other girls. A total of 24 girls and 4 counselors were similarly housed in the immediate area. The patient reported an "insect bite" on the third day in camp and first became ill 6 days later on August 19 with a fever that lasted 4 days. A second recurrence of fever on August 30 prompted the taking of a thick blood smear, which confirmed the diagnosis of tick-borne relapsing fever. The patient was treated with tetracycline and showed immediate improvement.

No other illnesses occurred in the group or were reported from other Girl Scout units camping during July and August. The elevated platform tents used by the Girl Scout campers were not conducive to rodent infestation. However, the general area has many natural harborages for chipmunks, and several nests, removed from decaying tree stumps within the camp, contained fleas and mites.

Reported by G Blakeman, MD, Denver; D Brandt, MD, Boulder; K Riff, MD, Denver General Hospital Medical Service; C Johnson,

International Notes**Influenza — Puerto Rico, Oregon, and Canada**

Puerto Rico: During a survey of dengue-like illness in Puerto Rico, paired serum specimens from 13 of 56 persons who exhibited no antibody rises to dengue demonstrated 4-fold or greater hemagglutination inhibition (HI) antibody titer rises to A/Victoria/3/75 and/or A/Texas/1/77. These persons had onset of febrile illness from August 16 through September 11. These confirmed influenza infections occurred in 8 of 79 municipalities throughout the island, including San Juan.

An outbreak of febrile respiratory disease is now in progress in rural southwest Puerto Rico. Since early October, 90% of patients seen in one hospital clinic had symptoms compatible with influenza including headache, myalgia, pharyngitis, cough, and some nausea and vomiting. Influenza A viruses were isolated from 4 of 6 patients cultured on October 18. Preliminary laboratory studies indicate that these strains are more closely related to A/Texas/1/77 than to A/Victoria/3/75.

The extent of influenza illness on the island is difficult to quantify since cases of dengue are appearing concurrently. Anecdotal reports indicate that febrile respiratory diseases began to appear in increasing numbers in September and are still continuing. Respiratory illness appears to be widespread throughout the island.

Oregon: An A/Texas/1/77-like strain of influenza has been isolated from a 72-year-old man hospitalized with pneumo-

Current Trends**Zoster Immune Globulin and Varicella-Zoster Immune Globulin**

Since January 1972, CDC has provided the investigational drug Zoster Immune Globulin (ZIG) to more than 1,000 immunodeficient children within 72 hours of exposure to varicella (chickenpox). Preliminary data suggest that ZIG, which is prepared from the plasma of healthy donors convalescing from herpes zoster infection (shingles) or varicella, is effective in preventing or modifying varicella infection in immunodeficient patients if it is administered shortly after exposure.

Unfortunately, the supply of ZIG has been intermittent

MD, Jefferson County Health Dept, Lakewood; JK Emerson, DVM, TM Vernon, MD, State Epidemiologist, Colorado State Dept of Health; Vector-Borne Diseases Div, Bur of Laboratories, and Field Services Div, Bur of Epidemiology, CDC.

Editorial Note: Although ticks were not found in association with these cases, the vector probably was *Ornithodoros hermsi*, a nest parasite of chipmunks and pine squirrels (*Tamiasciurus* species), resident in coniferous forests throughout most of western North America. No other relapsing fever vector is known to occur in the coniferous forest biome in North America.

The fact that no ticks were present in the rodent nests collected is not surprising. Normally, *O. hermsi* ticks remain in the nest, where all life functions are accomplished and where the ticks can feed on their rodent hosts. If the rodent resident does not return, ticks eventually disperse from the nest in search of a blood meal. This could lead them to a human rather than a rodent host, although the ticks do not prefer a host-parasite relationship involving humans, so it tends to be of short duration.

nia. His illness began on September 19. No other influenza infections have been documented in Oregon since July.

Canada: On August 5, a Canadian Forces aircraft left Brisbane, Australia, carrying 145 Australian infantrymen bound for Victoria, British Columbia. The airplane arrived in Victoria on August 6 after refueling stops in Fiji and Hawaii.

Within 12 hours after arrival, 12 Australians were seen with influenza-like symptoms consisting of moderate fever, cough, malaise, and headache. Within 96 hours, 62 more cases were seen. The overall attack rate among Australian troops was 62.8%.

In the period August 6-11, 20 secondary cases occurred among Canadian Forces Personnel in Victoria and among the Ontario-based flight crew. Five tertiary cases who had contact with only the secondary cases developed influenza-like symptoms on August 11 and 12. No further evidence of community spread was identified.

An influenza A isolate made during the outbreak has been characterized as A/Texas/1/77-like. No influenza activity is presently being reported in Canada.

Reported by H Negron, MD, State Epidemiologist, Puerto Rico Dept of Health; JA Googins, MD, State Epidemiologist, Oregon Health Div; Laboratory Centre for Disease Control, Ottawa, in *Canada Diseases Weekly Report* 3:137-138, 145-146, 1977; WHO Collaborating Center for Influenza, San Juan Laboratories, Respiratory Virology Br, Virology Div, Bur of Laboratories, Surveillance and Assessment Br, Immunization Div, Bur of State Services, CDC.

because the number of plasma donors has been insufficient to meet the increasing number of requests. In an attempt to meet this increasing demand, CDC has contracted with the Sidney Farber Cancer Institute and State Laboratory Institute of the Massachusetts State Department of Public Health to provide and distribute a supply of Varicella-Zoster Immune Globulin (VZIG), prepared from pooled plasma containing high titers of varicella antibody.

VZIG is also an investigational drug, and the supply of it is likewise limited. Unnecessary use can be minimized,

where feasible, by routine screening of children with immunodeficiency, leukemia, or lymphoma for VZ virus antibody.

Both ZIG and VZIG will be available at no cost as of November 1, 1977, for use in patients meeting the criteria outlined in Table 1. A physician who desires treatment for such a patient should contact:

Division of Clinical Microbiology
Sidney Farber Cancer Institute
44 Binney Street
Boston, Massachusetts
617-732-3121

Although former ZIG consultants and the Immunization Division, CDC, will no longer have responsibility for distribution of ZIG, they will be available for consultation regarding alternative modes of therapy.

Reported by Immunization Div, Bur of State Services, CDC.

Primary and Secondary Syphilis — United States, August 1977

Reported cases of primary and secondary syphilis numbered 1,877 in August 1977, down 4.7% from the 1970 cases reported in August 1976 (Table 2). This represents the 17th consecutive month in which a decline of cases has been reported. In the first 8 months of 1977 (January-August), 2,421 fewer cases (–15.2%) were reported compared to the same time period of the previous year. Nineteen areas reported more cases during the first 8 months of 1977

TABLE 1. Five criteria for release of *Varicella-Zoster Immune Globulin (VZIG)* for the prophylaxis of varicella

- One of the following underlying illnesses or conditions
 - Leukemia or lymphoma
 - Congenital or acquired immunodeficiency
 - Under immunosuppressive medication
 - Newly born of mother with varicella
- One of the following types of exposure to varicella or zoster patient
 - Household contact
 - Playmate contact (>1-hour play indoors)
 - Hospital contact (in same 2- to 4-room bedroom or adjacent beds in a large ward)
 - Newborn contact (newborn whose mother contracted varicella within 4 days before delivery or within 48 hours after delivery)
- Negative or unknown prior disease history
- Age of less than 15 years
- The request for treatment must be initiated within 72 hours of exposure

compared to the same time period of 1976. Early latent (less than 1-year duration) syphilis declined 12.3% in August 1977 versus August 1976. During the first 8 months of 1977 versus the comparable time period of 1976, some 1,983 fewer such cases were reported, representing a decline of 15.3%.

Reported by the Venereal Disease Control Div, Bur of State Services, CDC.

TABLE 2. Summary of reported primary and secondary syphilis cases by reporting area, August 1977 and August 1976 — provisional data

Reporting Area by HEW Regions	August		Calendar Year Cumulative January - August		Reporting Area by HEW Regions	August		Calendar Year Cumulative January - August		Reporting Area by HEW Regions	August		Calendar Year Cumulative January - August	
	1977	1976	1977	1976		1977	1976	1977	1976		1977	1976	1977	1976
Connecticut	15	10	120	107	Illinois (Excl. Chicago)	9	9	109	98	Arizona	13	17	111	154
Maine	2	4	18	18	Chicago	94	100	641	619	California (Excl. LA & SF)	132	173	980	1381
Massachusetts	47	58	393	357	Indiana (Excl. Indianapolis)	10	8	70	56	Los Angeles*	134	188	908	1228
New Hampshire	0	1	4	7	Indiana*	7	3	39	25	San Francisco*	73	78	571	520
Rhode Island	0	1	8	18	Michigan	27	18	182	182	Hawaii	1	9	23	65
Vermont	0	3	5	8	Minnesota	10	9	93	87	Nevada	4	1	13	30
REGION I TOTAL	64	77	546	511	Ohio	45	31	334	323	REGION IX TOTAL	357	462	2618	3376
New Jersey	38	48	239	382	Wisconsin	17	7	75	71	Alaska	1	2	20	18
New York (Excl. NYC)	18	15	184	183	REGION V TOTAL	218	181	1543	1421	Idaho	2	2	8	17
New York City	180	210	1177	1833	Arkansas	8	7	46	80	Oregon	13	9	84	71
REGION II TOTAL	214	271	1800	2178	Louisiana	88	27	485	380	Washington	24	11	180	101
Delaware	0	9	15	48	New Mexico	18	13	85	111	REGION X TOTAL	40	24	270	205
District of Columbia	38	39	389	394	Oklahoma	7	6	54	72	UNITED STATES TOTAL	1877	1970	13527	15948
Maryland (Excl. Baltimore)	9	18	104	132	Texas	217	157	1348	1288	Puerto Rico	63	57	413	418
Baltimore	35	33	190	274	REGION VI TOTAL	338	210	1978	1831	Virgin Islands	0	2	10	28
Pennsylvania (Excl. Phila.)	14	21	108	170	Iowa	3	9	25	31	United States, including Outlying Areas	1940	2029	13950	16392
Philadelphia	18	48	188	287	Kansas	1	7	42	54					
Virginia	44	85	373	454	Missouri	22	17	111	119					
West Virginia	2	1	3	19	Nebraska	1	5	25	28					
REGION III TOTAL	180	232	1348	1778	REGION VII TOTAL	27	38	203	230					
Alabama	23	20	98	131	Colorado	14	8	87	83					
Florida	139	190	1265	1717	Montana	0	2	4	8					
Georgia (Excl. Atlanta)	105	48	532	382	North Dakota	1	0	3	2					
Atlanta*	53	40	295	322	South Dakota	2	0	4	4					
Kentucky	12	8	82	90	Utah	0	2	5	20					
Mississippi	19	16	174	185	Wyoming	0	0	2	4					
North Carolina	56	78	578	872	REGION VIII TOTAL	17	12	105	131					
South Carolina	18	42	173	270										
Tennessee	18	21	149	218										
REGION IV TOTAL	443	483	3322	4187										

*County Data

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